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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,252	03/11/2004	Fabrice Letertre	4717-10400	9120

28765 7590 10/19/2005

WINSTON & STRAWN LLP  
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WASHINGTON, DC 20006

EXAMINER
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OSELE, MARK A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

12

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/800,252	LETERTRE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mark A. Osele	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20-25 is/are rejected.
- 7) ☒ Claim(s) 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03112004</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7, 9-17, 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Publication 1059663 (Iwasaki et al.). Iwasaki et al. shows a method of preparing a useful layer comprising preparing the surface of a silicon wafer comprising a first support to create a detachable interface with a useful layer such that the mechanical strength of the interface with residual material at the periphery of the wafer is greater than the mechanical strength of the interface with the useful layer in the center of the wafer so as to attenuate bonding between the useful layer and the first support caused by the residual material (page 11, line 55 to page 12, line 9; Figs. 2A-2H).

Regarding claim 5, internal stress forces are used to separate the useful layer from the first support (page 11, lines 8-13).

Regarding claim 4, before the separating step the useful layer is bonded to a second support by either molecular adhesion bonding (page 12, lines 6-7) or adhesive bonding (page 5, lines 29-30).

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Regarding claims 7 and 9-11, the method further comprises a step of removing the residual material by etching after masking the useful layer (See Fig. 2E; page 3, lines 41-44; page 12, lines 5-10).

Regarding claims 12-17, Iwasaki et al. also shows the further method steps of creating a plurality of channels around rectangular islets by chemical etching followed by bonding the islets to a second substrate and using stress forces to detach the islets at the interface (page 12, line 54 to page 13, line 13).

Regarding claims 20-23, a portion of the useful layer is deposited using full wafer epitaxy to deposit a plurality of layers (page 12, lines 26-29).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent Publication 1059663 (Iwasaki et al.). As shown in paragraph 2 above, Iwasaki et al. shows the claimed limitations but fails to expressly state that a portion of the first substrate is removed with the residual portion. Iwasaki et al. teaches that the entire interface should be removed by etching (page 15, lines 40-46). It would be likely that a portion of the first substrate would be removed by this etching step. If not, it would have been obvious to one of ordinary skill

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in the art at the time the invention was made to remove a thin layer of the first substrate to ensure that the entire interface layer is removed.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Publication 1059663 (Iwasaki et al.) in view of Sakaguchi et al. Sakaguchi et al. teaches that tensile forces, shearing forces, ultrasonic waves, and water jets are all interchangeable techniques for removing a useful layer from a support at an interface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a fluid jet in the method of Iwasaki et al. because Sakaguchi et al. shows this technique to be a functional equivalent to those techniques shown by Iwasaki et al.

***Allowable Subject Matter***

6. Claims 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

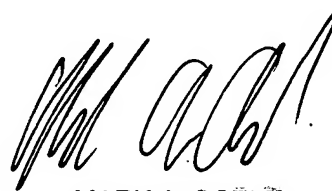
7. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art suggests using a first substrate with a recessed portion upon which the useful layer is deposited.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Osele whose telephone number is 571-272-1235. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**MARK A. OSELE  
PRIMARY EXAMINER**

October 17, 2005